

# [CMSC 425/525] In-Class: Mutation Fuzzing

Dr. Kosta Damevski

Consider the supplied Java code, including the `MutationFuzzer`, `MutationRunner` and `Mutators` classes.

1. In your own words, explain why the mutation fuzzer was able to find the bug in the `URLDecoder`. What can we learn from this experience as it applies to mutation fuzzing in general?

**MutationFuzzer:**

defines fuzz variables

**MutationRunner:**

Runs fuzzer  
compares url with mutated strings

**Mutators:**

delete, insert, and flip random chars

I think the mutation fuzzer was able to find the bug due to the chosen combination of mutators, as they can cover any test case